

Name: _____ TP: _____

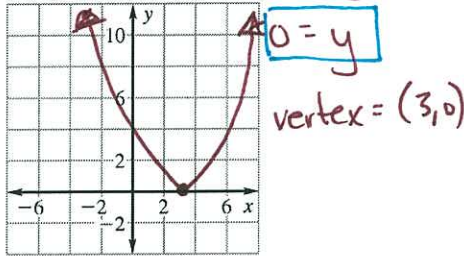
Failure to show work on all problems or use complete sentences will result in a LaSalle.

Form A

Solve the equation by graphing. How many solutions are there? SHOW how you found the axis of symmetry and the vertex.

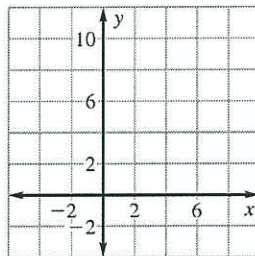
1) $x^2 - 6x + 9 = 0$
 $\frac{-b}{2a} = \frac{-(-6)}{2(1)} = \frac{6}{2} = 3 = x$

$(3)^2 - 6(3) + 9 = y$
 $9 - 18 + 9 = y$ AOS



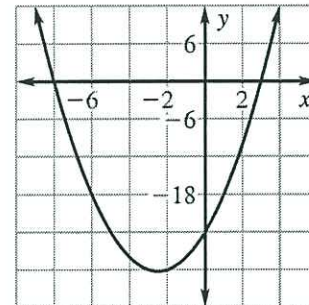
only 1 solution

2) $x^2 - 7x + 10 = 0$



3) Use the graph below to find the solutions of the given equation.

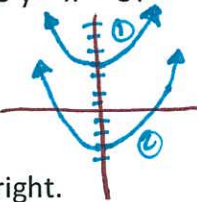
$x^2 + 5x - 24 = 0$



$x = \{ \quad , \quad \}$

4) How would the graph of the function $y = x^2 + 4$ be affected if the function were changed to $y = x^2 - 3$?

- A. The graph would shift 4 units up.
- B. The graph would shift 3 units down.
- C. The graph would shift 7 units down.
- D. The graph would shift 4 units to the right.
- E. The graph would shift 4 units down.



5) Which multiple choice option describes the correct transformation to the parent graph ($y = x^2$)?

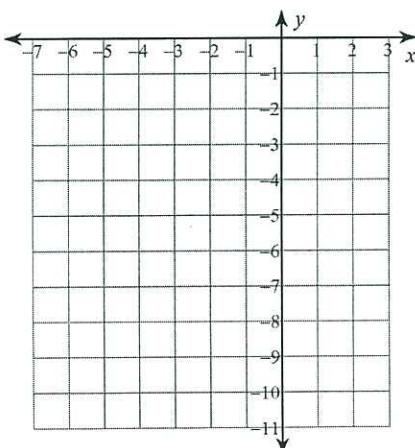
$y = -8x^2 + 5$

- A. Shrink and shift up 5 units
- B. Stretch and shift up 5 units
- C. Stretch and reflection across the x-axis
- D. Shrink, shift up 5 units, and reflection across the x-axis
- E. Stretch, shift up 5 units, and reflection across the x-axis

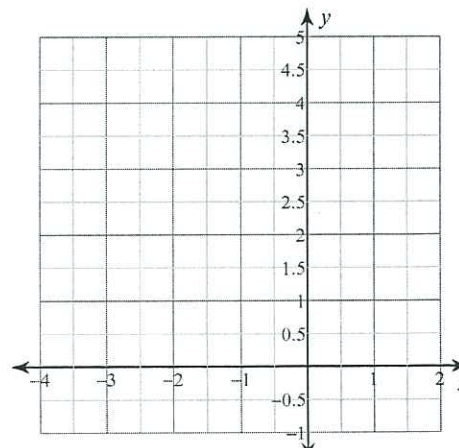
① =
② =
③ = up 5 units

Graph the equations below. Identify the axis of symmetry, vertex, and domain/range.

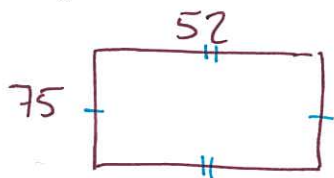
6) $y = -2x^2 - 8x - 10$ AOS = $\frac{-b}{2a}$



7) $y = -x^2 - 4x$



8) A rectangular playground is enclosed by a fence. How long will the fence be if the playground is 52 feet by 75 feet?



9) What is the circumference of a circle with radius of 25 inches?

$$C = 2\pi r$$

10) The height of a triangle is one half the length of the base. What is the area of the triangle if the height is 20 inches?

11) What is the area of a circle with a diameter of 50 centimeters?

$$A = \pi r^2$$

12) The area of a triangle is 50 square yards. If the base is 10 yards, how long is the heights?

$$A = \frac{1}{2} \cdot b \cdot h$$

$$50 = \frac{1}{2}(10)(h)$$

13) A rectangle has a perimeter of 72 units, and its length is twice its width. A right triangle has sides with lengths of 8, 15, 17. What is the difference in the areas of these figures, in square units?